



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/767,820 | 01/30/2004 | Mingzhu Li | CW-01-040130 | 6591 |
| 22712 | 7590 | 05/23/2005 | EXAMINER | |
| PAUL A. GUSS PAUL A. GUSS ATTORNEY AT LAW 775 S 23RD ST FIRST FLOOR SUITE 2 ARLINGTON, VA 22202 | | | VO, TUYET THI | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2821 | |

DATE MAILED: 05/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/767,820

Applicant(s)

LI ET AL.

Examiner

Tuyet Vo

Art Unit

2821

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 July 2004.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1, 2, 4-17, 19 and 20 is/are rejected.
7) ☒ Claim(s) 3 and 18 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 15 July 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 1/30/2004.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. **The title of the invention is not descriptive.** A new title is required that is clearly indicative of the invention to which the claims are directed.

The specification has been checked to the extent necessary to determine the presence of all possible minor errors. However, the applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the heat sink must be shown or the feature(s) canceled from the claim 6. No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 2, 4, 5, 16, 17, 19 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Allen (US Pat. 6,461,019), hereinafter Allen.

Regarding claims 1, 2, 16, 17 and 20, Like claim invention, Allen discloses an apparatus an method as well (Fig. 2B) for energizing light emitting diodes (LEDs) comprising a light module including a first LED connected in parallel and same polarity with a second LED, wherein one of the first and the second LED has a maximum total current rating I_{max} is selected approximately 95 mA (col. 12, lines 8-62) that is sufficient to carry/hole all current conducted through the light module around 20 mA.

Regarding claims 4, 5 and 19, Allen further discloses the first and the second LED have similarly electrical characteristics such as the same forward voltage drop (2.2 VAC, col. 3, lines 29-31 and col. 4, lines 8-23), wherein a light diffuser covering the first and second LEDs (Fig. 6A and 6B).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2821

6. Claims 6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Allen in view of Klinke et al. (5,404,282), hereinafter Klinke.

Regarding claim 6, Allen disclose discloses substantially the claim invention as noted above except for comprising a heat sink thermally connected to both the first and second LEDs.

Klinke discloses a multiple light emitting module comprising a bus bar (28) connected to light emitting diodes (col. 6, lines 40-61).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to a bus bar as heat sink for reducing heat of LEDs as taught by Klinke into the Allen lighting system in order to extend a lamp life service by preventing expansion of thermal stress. Such implementation is considered as a routine skill in the art.

Regarding claim 8, Allen in view of Klinke discloses substantially the claim invention as note above and Klinke further discloses a third and a fourth LED connected in parallel to the first and the second LED in an opposite polarity (Fig. 4).

7. Claims 7 and 9-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Allen in view of Yamuro (US Pub. 5,155,699).

Regarding claim 9, Allen discloses substantially the claim invention as noted above except for comprising a plurality of additional light modules connected together in series to the light module.

Yamuro discloses a light emitting apparatus having two lighting modules connected in series, wherein each of the light module comprising two parallel LEDs arranged in the same polarity.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize several lighting modules connected in series as taught by Yamuro into the Allen lighting system in order to extend a lamp structure in variety configuration as desired. Such implementation is considered as a routine skill in the art.

Regarding claim 7, Allen in view of Yamuro discloses substantially the claim invention as noted above and Yamuro further teaches a light bulb (6) covering the LEDs for light diffusing.

Art Unit: 2821

Regarding claims 10-15, Allen in view of Yamuro discloses substantially the claim invention as noted above and Allen further discloses the sum of the minimum/maximum operating voltage from apparatus supplied to each module of first and second LEDs (2.2VAC) is between the minimum and the maximum of the operating voltage of the first and second LEDs (Figs. 12 and 13) while Yamuro mentions a necessary of an resistor (8) connected in series with the LED, if needed, for regulating the power supply.

Allowable Subject Matter

8. Claims 3 and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The following is a statement of reasons for the indication of allowable subject matter: the prior fails to establish a first and second LEDS have dissimilar electrical characteristics, such that the first LED carries all of the current conducted through the 'light module while the second LED remains unused unless and until the first LED fails open as required in claims 3 and 8.

Citation of pertinent prior art

10. The prior art made of record and not relied upon is considered pertinent to applicants' disclosure.

Wesson (US Pat. 6,786,625) discloses LED light module for vehicles.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuyet Vo whose telephone number is 571 272 1830. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on 571 272 1834. The fax phone numbers for the

Art Unit: 2821

organization where this application or proceeding is assigned are 703 872 9306 for regular communications and for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308 0956.

A handwritten signature in cursive script, appearing to read 'Tuyet Vo', is written over a horizontal line.

Tuyet Vo

Primary Examiner

May 16, 2005